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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/071,261	02/07/2002	Dan A. Steinberg	23091/17 (ACT-181)	9176
7590 06/16/2004			EXAMINER	
ACT MicroDevices, Inc. 3150 Stage Street Blacksburg, VA 24060			HEALY, BRIAN	
			ART UNIT	PAPER NUMBER
			2874	

DATE MAILED: 06/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application N .

10/071,261

Applicant(s)

STEINBERG ET AL.

Examiner

Brian M. Healy

Art Unit

2874

-- The MAILING DATE of this communication appears on the cover sheet with the corresponding address --  
Priority Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 March 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-48 is/are pending in the application.
- 4a) Of the above claim(s) 36-48 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 21-35 is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 36-48 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 06102004.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Election/Restrictions***

Applicant's election with traverse of the restriction requirement of 2/25/2004 in the reply filed on 3/29/2004 is acknowledged. The traversal is on the ground(s) that a serious burden does not exist on the Examiner because the method of making the optical sub-mount would overlap the search for the optical submount itself. This is not found persuasive because the examiner has demonstrated that the device and method for making the device have divergent fields of search. Also the method of making the device could have wider applications such as making purely electrical devices. The inclusion of method limitations in article or device claims does not necessarily mean that patentability will turn on the method limitation, but rather it is up to Applicant to show why the inclusion of the method limitation would result in a material difference in the device that could not be obtained using other methods available to a skilled artisan.

The requirement is still deemed proper and is therefore made **FINAL**. Claims 36-48 are withdrawn from consideration as being directed to a non-elected invention.

### ***Allowable Subject Matter***

Claims 21-35 allowed over the prior art of record. None of the references of record teaches or suggests: a micro machined crystalline substrate with a dry pit intersecting an anisotropically etched groove which intersects the groove at angles of 45 deg. Or less so that a wedge is not present in the groove adjacent to the dry pit; a first and second anisotropically etched groove with a dry pit disposed at a convex corner location where the first and second grooves meet or having a U-shaped dry pit

intersecting the wet pit and a U – area inside the U-shaped dry pit wherein the U-shaped dry pit is disposed so that the U-area is not part of the wet pit. These limitations are recited in claims 21-35 and are considered to be patentable over the prior art of record.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Tabuchi, U.S.P. No.5,611,006.

Tabuchi 006' teaches (Figs.1-17) an optical submount and method of making same comprising: a crystalline silicon substrate 11,13, one or more anisotropically etched grooves in the substrate 24,42D, a pit or series of pits 25a,25b,25c,25d that intersects the groove at one end of the groove wherein the pits intersects a wedge area of the groove so that optical components (fibers 23, lenses 16a-d and prism 18) can be placed inside of the pits and grooves. The pits can be made from dry etching processes (See Col. 1, lines 61-68) and are of a greater depth than the grooves. The pits can be triangularly shaped. The teachings of Tabuchi 006' clearly, fully meets Applicant's claimed limitations.

A copy of PTO-1449 will be included in this office action.

The following references are cited by the Examiner as being pertinent prior art: Blonder, U.S.P. No. 4,810,557 (Figs.1-5), Jerman, U.S.P. No.5,338,400 (Figs.1-8B), Steinberg, U.S. Patent Application Publication No. U.S. 2003/0020130A1 (Note entire reference.), Nakanishi et. al., U.S.P. No. 5,478,438 (Figs.1-7d) and Okada et. al., U.S.P. No. 6,567,590 (Figs.1-31).

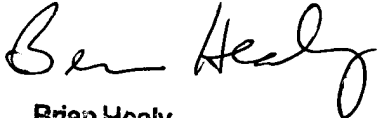
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian M. Healy whose telephone number is (571) 272-2347. The examiner can normally be reached on Compressed Schedule Tues-Thurs 7AM-4PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rodney Bovernik can be reached on (571)272-2344. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Brian M. Healy  
Primary Examiner  
Art Unit 2874

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Brian Healy  
Primary Examiner